

Kininogen-1 Protein, Human (409a.a, HEK293, His)

Cat. No.:	HY-P70956
Synonyms:	Kininogen-1; Ipha-2-Thiol Proteinase Inhibitor; Fitzgerald Factor; High Molecular Weight Kininogen; HMWK; Williams-Fitzgerald-Flaujeac Factor; KNG1; BDK; KNG
Species:	Human
Source:	HEK293
Accession:	P01042-2 (Q19-S427)
Gene ID:	3827
Molecular Weight:	Approximately 63.0 kDa

PROPERTIES

AA Sequence	<p>Q E S Q S E E I D C N D K D L F K A V D A A L K K Y N S Q N Q S N N Q F V L Y R</p> <p>I T E A T K T V G S D T F Y S F K Y E I K E G D C P V Q S G K T W Q D C E Y K D</p> <p>A A K A A T G E C T A T V G K R S S T K F S V A T Q T C Q I T P A E G P V V T A</p> <p>Q Y D C L G C V H P I S T Q S P D L E P I L R H G I Q Y F N N N T Q H S S L F M</p> <p>L N E V K R A Q R Q V V A G L N F R I T Y S I V Q T N C S K E N F L F L T P D C</p> <p>K S L W N G D T G E C T D N A Y I D I Q L R I A S F S Q N C D I Y P G K D F V Q</p> <p>P P T K I C V G C P R D I P T N S P E L E E T L T H T I T K L N A E N N A T F Y</p> <p>F K I D N V K K A R V Q V V A G K K Y F I D F V A R E T T C S K E S N E E L T E</p> <p>S C E T K K L G Q S L D C N A E V Y V V P W E K K I Y P T V N C Q P L G M I S L</p> <p>M K R P P G F S P F R S S R I G E I K E E T T S H L R S C E Y K G R P P K A G A</p> <p>E P A S E R E V S</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM HAc-NaAc, 150 mM NaCl, pH 4.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Kininogen-1, a pivotal player in blood coagulation, functions as an inhibitor of thiol proteases. In this capacity, HMW-
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kininogen strategically positions prekallikrein and factor XI adjacent to factor XII, crucial for blood clotting regulation. HMW-kininogen actively prevents thrombin- and plasmin-induced thrombocyte aggregation, contributing to hemostasis. In contrast, LMW-kininogen is not involved in blood clotting but exerts inhibition on thrombocyte aggregation. The active peptide bradykinin, released from HMW-kininogen, manifests diverse physiological effects, including influencing smooth muscle contraction, inducing hypotension, promoting natriuresis and diuresis, reducing blood glucose levels, mediating inflammation through increased vascular permeability, stimulating nociceptors, and triggering the release of other inflammatory mediators like prostaglandins. Additionally, bradykinin exhibits a cardioprotective effect, acting directly and indirectly through endothelium-derived relaxing factor action. The multifaceted roles of kininogen-1 underscore its significance in orchestrating various physiological processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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